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(54) NANOPARTICLE ADJUVANTS FOR
SUB-UNIT VACCINES

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(57) **ABSTRACT**

The present invention relates to nanoparticle vaccine adjuvants comprised of a carrier, particularly polymerized lipids, having multiple copies of an antigen or combinations of different antigens displayed on the carrier. Such antigen-displaying nanoparticles may also display a targeting molecule on its surface in order to direct it to a specific site or cell type to optimize a desired immune response. The present invention also relates to encapsulating an antigen or combinations of different antigens within such nanoparticles, with or without a targeting molecule displayed on its surface. The antigens used in this invention are effective to produce an immune response against a variety of pathological conditions.

**Depiction of Attaching Surface-Displayed Molecules to a Pre-Formed
Nanoparticle.**

